



Facts

Food Safety, Animal Health and Consumer Services
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Protecting ruminant animal feed from BSE contamination

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BSE, dubbed "mad cow disease" by the British public, has swept across Europe. As of July, 15 European countries had reported cases, and three non-European nations have reported cases of BSE in cattle imported from the United Kingdom. Whole herds have been destroyed and the European beef industry faces potential ruin.

The fact that, until recently, BSE was believed to be confined to Great Britain, drives home the value of the Food and Drug Administration's (FDA) ban on the use of mammalian protein in ruminant feed. Ruminants are animals that chew their cud, such as cattle, deer, bison, goats, and sheep.

We must all play a role in keeping BSE out of the U.S.

What is BSE?

BSE, bovine spongiform encephalopathy, is one variety of a rare group of diseases known as transmissible spongiform encephalopathies (TSEs). TSEs cause microscopic holes in the brain, giving it a sponge-like appearance. TSEs are always fatal, and they affect both humans and animals.

Cattle are believed to become infected with BSE when they consume feed that contains remnants of infected animals. Although the material is cooked during the rendering process, the BSE agent can survive the processing.



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The human form of TSE is Creutzfeldt-Jakob disease (CJD). It is believed that a variant form of CJD may be linked to consumption of beef infected with BSE. While typical CJD usually affects people over 60, variant CJD usually affects people under 40.

Has BSE reached the U.S.?

No. The U.S. Department of Agriculture (USDA) began searching for evidence of BSE in this country as early as 1990. USDA plans to increase surveillance nationwide, adding two new people in Washington state.

By July, brain tissue samples from 13,916 high-risk cattle in the U.S., including 80 in Washington state, had been evaluated for BSE. All tested negative for the disease.

For BSE, high risk cattle are those that exhibit central nervous system disorders.

How is BSE kept out of the U.S.?

To prevent the threat of BSE through feed in this country, FDA implemented a rule in 1997 that prohibits the feeding of nearly all mammalian protein to ruminants.

The only mammalian proteins that may be used are milk products, blood products, gelatin, pure pig and horse protein, and inspected meat products cooked and offered for human consumption and further heat processed.

All other types of mammalian protein are prohibited materials. FDA's ruminant feed rule requires feed products that contain prohibited materials to be labeled ***Do not feed to cattle or other ruminants.***

Companies must keep records about the source of material used in feed and its distribution as well as written procedures to prevent cross-contamination of ingredients.

FDA's enforcement plan includes education and inspections. If violations are found, regulatory action will be taken against the offending party.

FDA prohibits the use of nearly all mammalian protein in ruminant feed.

Exceptions include:

- ***Milk products***
- ***Blood products***
- ***Gelatin***
- ***Pig and horse protein***
- ***Meat products offered for human consumption and further heat processed***

Compliance checks show room for improvement

State and federal feed officials began inspecting all rendering plants and feed mills as early as 1998.

To date 9,867 inspections have been completed. Of all firms inspected, 27 percent or 2,653 firms handle prohibited materials. Of those:

- 84 percent properly labeled all products.
- 92 percent had adequate systems to prevent co-mingling of prohibited and non-prohibited materials.
- 96 percent had complete records.
- 78 percent were in full compliance with the rule.

When firms are found to be out of compliance with the feed ban rule, FDA lists them for re-inspection. As of June, 1,251 re-inspections have been reported. Of those, 92 percent now are in full compliance with the rule.

Firms used a variety of methods to achieve compliance, including further employee training, developing systems to prevent co-mingling, proper labeling of products, adhering to record keeping regulations, or by eliminating prohibited materials from their operations.

For more detailed information, visit FDA's Web site at <http://www.fda.gov/cvm/index/updates/bse72001.htm>.

Protect your cattle from BSE

No case of BSE has been reported in the U.S. Let's keep it that way. While state and federal feed officials work to bring all of these companies into compliance, take a moment to ensure that the feed you give cattle or other ruminants contains no prohibited mammalian protein.

Food intended for dogs, cats, fish and other pets often contains mammalian protein. Pet food labels are excluded from the required cautionary statement. Therefore, keep pet food away from your ruminant animals. Talk to your feed suppliers to ensure they are aware of and following the rule.

FDA requires ruminant producers to keep feed labels and purchase records of all feeds that contain animal proteins for at least one year. These records help to protect human health and will be used to determine if a herd is at risk for contracting BSE if a case is ever detected in the U.S.

We have an opportunity to protect U.S. beef, but we need your help. One isolated, undetected case of BSE could be spread throughout the industry if the infected animal is processed into cattle feed.

After the first case of BSE was identified in the United Kingdom in 1986, the disease was declared an epidemic in cattle herds throughout the country. Enormous animal health problems and devastating economic losses followed.

There are human implications, too. To date, 102 people in the United Kingdom have died or become ill from variant CJD. Another three cases were diagnosed in France and one in Ireland. For more information, visit http://www.doh.gov.uk/cjd/cjd_stat.htm.

Next steps for state and federal feed officials

Government continues to inspect all rendering plants and feed mills, with a goal of total compliance with rules banning mammalian protein in ruminant feed.

Examples of prohibited mammalian materials

The Code of Federal Regulations (Title 21 Part 589.2000) prohibits the use of mammalian protein in ruminant feed except: milk products, blood products, gelatin, pure pork and horse protein, inspected meat products cooked and offered for human consumption and further heat processed. The 2001 Official Publication of the Association of American Feed Control Officials defines the following mammalian protein sources as prohibited unless derived from pure pork or horse:

- Animal digest, animal liver, animal by-product meal, glandular meal, extracted glandular meal, fleshings hydrolysate
- Meat, meat by-products, meat protein isolate, meat meal, meat meal tankage, dried meat solubles
- Meat and bone meal, meat and bone meal tankage, cooked bone meal
- Steamed bone meal, cooked bone marrow, mechanically separated bone marrow
- Hydrolyzed hair, hydrolyzed leather meal, leather hydrolysate, stock, unborn calf carcasses, dehydrated garbage, dehydrated food waste

Where can I get additional information?

FDA's Center for Veterinary Medicine offers the following information on animal proteins prohibited from animal feed.

- *Small entity compliance guide for producers with on-farm mixing operations* (Guidance for industry document 69)
- *Interpretation of on-farm feed manufacturing and mixing operations* (Guidance for industry document 77)
- *Small entity compliance guide for producers without on-farm mixing operation* (Guidance for industry document 70)
- *Small entity compliance guide for renderers* (Guidance for industry document 67)
- *Small entity compliance guide for protein blenders, feed manufacturers, and distributors* (Guidance for industry document 68)

Copies are available on the Internet <http://www.fda.gov/cvm/guidance/guidance.html>, by phone (301) 594-1726, or mail Food and Drug Administration, Center for Veterinary Medicine, Division of Compliance, 7500 Standish Place, HFV-230, Rockville, MD 20855. You may also call Neil Lanning, Washington State Department of Agriculture at (360) 902-2052.